ABSTRACT

An exciter system (**10**) is provided for use in facilitating electromagnetic communication within an enclosed space (**12**). The system (**10**) includes an exciter (**26**) which may be in the form of a three dimensional hemispherical exciter (**28**) or a two dimensional planar sector exciter (30) depending on the size of the associated structure and the power requirements of operation. The exciter system (**10**) operates in conjunction with a hub/controller network (**44**). The exciter system (**10**) is adapted to induce a quasi-static evanescent field (**20**) within the space and to thereby enable communications using the evanescent field (**20**) at frequencies within an operational frequency range determined by the characteristics of the space. The exciter (**26**) is mounted in opposition to a portion of a conductive framework (**18**) within the enclosed space, and is separated therefrom. In operation, a coaxial connector (**48**) connects the exciter (**26**) to the hub/controller network (**44**) with the center conductor (**50**) connecting at a feed point (**66**) to the exciter (**26**) while the shield conductor (**52**) is connected to the opposing conductive framework (**18**). In some embodiments a post (**40**) acts as a curtain to enhance performance at lower frequencies

CORRESPONDENCE CHART
60607.3005.01
Exciter System and Method for Communications Within an Enclosed Space

This correspondence chart is provided for ease of understanding informational purposes only, and does not constitute a part of the formal patent application.

10	System for facilitating electromagnetic communications within an enclosed space (Exciter System)
12	Enclosed Space
14	Small Space
16	Large Space
18	Conductive Framework
20	Quasi-static Electromagnetic Field
22	Bubble
24	Gaps
26	Exciter Element (Matching Section)
28	Hemispherical exciter (3-D Exciter)
30	Planar Sector exciter (2-D Exciter)
32	Physical Support Structure
34	Wall
36	Floor
38	Ceiling
40	Post
42	Spacer
43	Dielectric Insulator
44	Hub Controller Network
46	Probes / Receivers
48	Coaxial Cable

50	Center Conductor
52	Shield
54	Hollow Hemisphere (Bowl)
56	Rim
58	Angularly Derived Sectors
60	Nonconducting Bulkhead
62	Hollow Interior
64	Matching Circuit Block
66	Feed Point
68	Metal Framework (Wall)
70	Conductive Trace
72	Insulating Structural Plate
74	Central Zone
76	Plumbing Pipe